Message

From: Detlef Knappe [knappe@ncsu.edu]
Sent: 6/4/2018 11:57:26 PM
To: Nadine Kotlarz [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=userc79d3fb6]
CC: McCord, James [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=McCord, James]; Strynar, Mark [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=5a9910d5b38e471497bd875fd329a20a-Strynar, Mark]; Zachary Hopkins [zrhopkin@ncsu.edu]; Chuhui Zhang [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=user88898f79]
Subject: Re: Package Delivery

Wow! Nice!
Detlef

On Mon, Jun 4, 2018 at 7:05 PM, Nadine Kotlarz <nkotlar@ncsu.edu> wrote:
Here are the LOQs from our last serum run on the Orbitrap:

Compound	LOQ (ng/mL)
PFBA	0.25
PMPA	1
Nafion bp4	2.5
PFO2HxA	0.5
PFPeA	0.5
PEPA	0.1
NVHOS	0.1
PFBS	1
PFHxA	0.1
PFO3OA	0.1
GenX	0.25
PFHpA	0.1
PFO4DA	0.1
6:2FTS	0.1
PFHxS	0.1
PFOA	0.1
PFO5DoDA	0.1
Nafion bp1	0.1
PFNA	0.1
Nafion bp2	0.1
PFDA	0.1
PFOS	0.1

On Mon, Jun 4, 2018 at 11:20 AM, McCord, James <mccord.james@epa.gov> wrote:

For the Orbitrap, Nadine could give you the exact numbers for each compound in serum, but they are on the order of a few hundred femtograms on column. Extrapolating that would be around 10 fg/L in water before SPE, assuming the processing losses are negligible, which might be overly optimistic.

I think our QqQ is suffering in sensitivity compared to what Chemours is using. Their LC-MS settings are almost identical to what we are using, but the spec sheet for their MS implies it's about three orders of magnitude higher in sensitivity. Hence they can get away without SPE just like we can on the Orbi for serum.

--

James McCord

From: Strynar, Mark
Sent: Monday, June 4, 2018 10:55 AM
To: Detlef R. U. Knappe <knappe@ncsu.edu>
Cc: Zachary Hopkins <zrhopkin@ncsu.edu>; Nadine Kotlarz <nkotlar@ncsu.edu>; Chuhui Zhang <czhang24@ncsu.edu>; McCord, James <mccord.james@epa.gov>
Subject: RE: Package Delivery

We have MRLs for these on the Orbi from Nadine's work. Not sure about water yet or the QQQ. For sure not yet on the TOF.

Mark

From: Detlef Knappe [mailto:knappe@ncsu.edu]
Sent: Monday, June 04, 2018 8:35 AM
To: Strynar, Mark <Strynar.Mark@epa.gov>
Cc: Zachary Hopkins <zrhopkin@ncsu.edu>; Nadine Kotlarz <nkotlar@ncsu.edu>; Chuhui Zhang <czhang24@ncsu.edu>; McCord, James <mccord.james@epa.gov>
Subject: Re: Package Delivery

Yup... No SPE...

For water, do we have MRLs for the compounds sent by Chemours on

1. QQQ

2. TOF

3. Orbi

Detlef

On Mon, Jun 4, 2018 at 8:05 AM, Strynar, Mark <Strynar.Mark@epa.gov> wrote:

Had not seen this. Thanks for sharing. Just looks like a dilute and shoot method.

Mark

From: Detlef Knappe [mailto:knappe@ncsu.edu]
Sent: Sunday, June 03, 2018 8:49 PM
To: Zachary Hopkins <zrhopkin@ncsu.edu>
Cc: Strynar, Mark <Strynar.Mark@epa.gov>; Nadine Kotlarz <nkotlar@ncsu.edu>; Chuhui Zhang <czhang24@ncsu.edu>; McCord, James <mccord.james@epa.gov>
Subject: Re: Package Delivery

Great.

Have you seen this posting?

https://www.chemours.com/Fayetteville-Works/en-us/c3-dimer-acid/standardized-analytical-protocol/index.html

On Sun, Jun 3, 2018 at 2:14 PM, Zachary Hopkins <zrhopkin@ncsu.edu> wrote:

Here are the structures fort the compounds. I have also attached the SDS for each.

On Sun, Jun 3, 2018 at 1:14 PM, Detlef Knappe <knappe@ncsu.edu> wrote:

Hi all,

Can one of you send me the structures and CAS #s (if available) for Nafion byproduct 4 and for NVHOS?

Thank you,

Detlef

On Fri, May 25, 2018 at 10:15 AM, Strynar, Mark <Strynar.Mark@epa.gov> wrote:

Works for me.

Mark

From: Detlef Knappe [mailto:knappe@ncsu.edu]
Sent: Friday, May 25, 2018 8:30 AM

To: Strynar, Mark <Strynar.Mark@epa.gov>
Cc: Nadine Kotlarz <nkotlar@ncsu.edu>; Hopkins, Zachary <zrhopkin@ncsu.edu>; Chuhui Zhang <czhang24@ncsu.edu>; McCord, James <mccord.james@epa.gov>
Subject: Re: Package Delivery

How about 8:30 at EPA?

Detlef

On Fri, May 25, 2018 at 7:49 AM, Strynar, Mark <Strynar.Mark@epa.gov> wrote:

My Tuesday is good except after 2 PM. My Wednesday is booked full.

Mark

From: Detlef Knappe [mailto:knappe@ncsu.edu]
Sent: Friday, May 25, 2018 7:37 AM
To: Strynar, Mark <Strynar.Mark@epa.gov>
Cc: Nadine Kotlarz <nkotlar@ncsu.edu>; Hopkins, Zachary <zrhopkin@ncsu.edu>; Chuhui Zhang <czhang24@ncsu.edu>; McCord, James <mccord.james@epa.gov>
Subject: Re: Package Delivery

Should we meet to discuss strategy for QQQ method development? Looks like Zack and Chuhui need similar methods. Chuhui would like to add F53B to the ether method.

My Tuesday is reasonable. My Wednesday afternoon, too.

Detlef

On Fri, May 25, 2018, 7:29 AM Strynar, Mark <Strynar.Mark@epa.gov> wrote:

Yes we do. These are known as PMPA and PEPA from Chemours. These are still both quite pronounced in the creek water that was the old effluent stream.

Mark

From: Detlef Knappe [mailto:knappe@ncsu.edu]
Sent: Thursday, May 24, 2018 7:25 PM
To: Nadine Kotlarz <nkotlar@ncsu.edu>
Cc: Zachary Hopkins <zrhopkin@ncsu.edu>; Chuhui Zhang <czhang24@ncsu.edu>; Strynar, Mark <Strynar.Mark@epa.gov>; McCord, James <mccord.james@epa.gov>
Subject: Re: Package Delivery

Hi all,

Do we have these compounds?

I know we have the linear methoxy versions, but I don't know whether Chemours sent the branched isomers.

Best,

Detlef

On Mon, May 7, 2018 at 5:18 PM, Nadine Kotlarz <nkotlar@ncsu.edu> wrote:

Zack,

The standards we recently received from Chemours were at 1000 ng/uL in water. I prepared 10 ng/uL aqueous stocks for each compound. Then I prepared a 1 ng/uL combined stock with:

1. PFO2HxA
2. NVHOS
3. PFO5DoA
4. PFO4DA
5. PFO3OA
6. PEPA
7. PMPA
8. Nafion byproduct 4

in water.

I already had a 1 ng/uL combined stock of GenX, PFMOAA, Nafion byproduct 1 and Nafion byproduct 2 in methanol. We prepared these standards with solids from Chemours a while ago. We decided we will make our calf serum calibration curves by dosing in the methanol and aqueous mixtures separately.

You're welcome to use any of the dilutions you want. They're stored in the cabinet to the bottom left of Mark's work space in the lab with the triple quad.

Nadine

On Wed, May 2, 2018 at 2:16 PM, Nadine Kotlarz <nkotlar@ncsu.edu> wrote:

> Sounds good. I'll bring the standards over to EPA tomorrow morning.

On Wed, May 2, 2018 at 2:14 PM, Detlef Knappe <knappe@ncsu.edu> wrote:

> Cool. And the PFO5DoA is included! Great for the blood work, Nadine :) My understanding is that Chemours didn't send this compound to Mark. Let's make sure it gets included in the method development.
>
> Detlef
>
> Detlef
>
> On Wed, May 2, 2018, 9:15 AM Zachary Hopkins <zrhopkin@ncsu.edu> wrote:
>
> > Detlef,
> >
> > Picked the standards up. We have the following now.
> >
> > PFHO2HxA
> >
> > PFMOAA
> >
> > PFO5DoA
> >
> > PFO4DA
> >
> > PFO3OA
> >
> > PEPA
> >
> > PMPA
> >
> > PFESA Byproduct 1
> >
> > PFESA Byproduct 2
> >
> > PFESA Byproduct 4
> >
> > NVHOS
> >
> > Best,
> >
> > Zack

On Wed, May 2, 2018 at 10:04 AM, Detlef Knappe <knappe@ncsu.edu> wrote:

Zack,

See below.

The standards!

Detlef

---------- Forwarded message ---------
From: Barbara Simerson <bjsimers@ncsu.edu>
Date: Wed, May 2, 2018, 6:55 AM
Subject: Package Delivery
To: Detlef Knappe <knappe@ncsu.edu>

A package from Chemours was received addressed to you.

--

Barbara Simerson

Bookkeeper

North Carolina State University
Civil, Construction, and Environmental Engineering
2501 Stinson Drive/ 208 Mann Hall
Campus Box 7908
Raleigh, NC 27695
Phone: 919-515-7628
Fax: 919-515-7908

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Best,

Zack Hopkins

PhD student

Graduate Research Assistant

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zrhopkin@ncsu.edu

301-518-7697

--

Best,

Zack Hopkins

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